

# Notice of Allowability

Application No.

10/828,584

Applicant(s)

KNIGHT ET AL.

Examiner

Toan M. Le

Art Unit

2863

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/18/06.
2. ☒ The allowed claim(s) is/are 1-56.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Allowable Subject Matter*

Claims 1-56 are allowed.

Claims 1-56 are allowable over the prior art of record, none of the prior art whether together singularly or in combination to teach the claimed combination as recited. The closest reference No. 4,068,160 or reference No. 7,065,449 does not disclose or suggest the improvement of the instant application comprises receiving the elevation slope, magnetic and gravity data sets and applying the gravity and magnetic data sets to the elevation slope data set as matrices in a transfer function to link the elevation slope data set and output an oil/mineral deposit prediction value indicative of the likely presence of oil or mineral deposits as in independent claims 1 and 28.

The reason for allowance of claims 14 and 41 is the inclusion of receiving the elevation slope, magnetic and gravity data sets and establishing vector representations indicative of gradients for the elevation slope, magnetic and gravity data sets and applying a transfer function to the vector representations to link the elevation slope data set and output an oil/mineral deposit prediction value indicative of the likely presence of oil and mineral deposits.

The reason for allowance of claim 55 is the inclusion of receiving the elevation slope, magnetic and gravity data sets and applying the gravity and magnetic data sets to the elevation slope data set in a transfer function to link the elevation slope data set and output an oil/mineral deposit prediction value indicative of the likely presence of oil or mineral deposits as an assigned probability value based on the transfer function.

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The reason for allowance of claim 56 is the inclusion of receiving the Digital Terrain Elevation Data (DTED), magnetic and gravity data sets and applying the gravity and magnetic data sets to the DTED in a transfer function to link the elevation slope data set and output an oil/mineral deposit prediction value indicative of the likely presence of oil or mineral deposits.

Instead reference No. '160 teaches correlating a set consisting of filtered magnetic field intensities with a set consisting of filtered gravitational field intensities to detect subsurface mineral exhibiting relatively high density and relatively low magnetic susceptibility through utilization of gravitational field intensity and surface elevation information.

Reference No. '449 teaches gradient full-tensor gravity gradient data in response to variations in density of the rocks and minerals.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan M. Le whose telephone number is (571) 272-2276. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Toan Le

March 5, 2007



John Barlow  
Supervisory Patent Examiner  
Technology Center 2800